

Multimedia Encryption, Transmission and Authentication

Edited by

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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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Contents

	Page No.
Part I- Multimedia Encryption and Transmission	
Chapter 1 Image and Video Coding Techniques <i>Sinzobakwira Issa and Othman O. Khalifa</i>	2
Chapter 2 Video Coding: MPEG standards <i>Othman O. Khalifa, Sinzobakwira Issa and Muhammad Umar Siddiqi</i>	7
Chapter 3 H.264/Advance Video Coding Standard <i>Othman O. Khalifa, Sinzobakwira Issa and Aisha-Hassan Abdulla</i>	16
Chapter 4 Development of Scalable Video Compression algorithm <i>Othman O. Khalifa, Sinzobakwira Issa and Mohamed Abomhara</i>	22
Chapter 5 Video Encryption Using Computation between H.264/AVC and AES Encryption Algorithm <i>Mohamed Abomhara Omar Zakaria and Othman O. Khalifa</i>	29
Chapter 6 Selective Video Encryption Algorithm Based on H.264/AVC and AES <i>Mohamed Abomhara Omar Zakaria and Othman O. Khalifa</i>	39
Chapter 7 Scalable Video Coding: A Review <i>Haris Al Qodri Maarif, Teddy Surya Gunawan, Othman O. Khalifa</i>	56
Chapter 8 JSVM Reference Software <i>Haris Al Qodri Maarif, Teddy Surya Gunawan, Othman O. Khalifa</i>	71
Chapter 9 Fast Mode Decision Algorithm <i>Haris Al Qodri Maarif, Teddy Surya Gunawan, Othman O. Khalifa</i>	78
Chapter 10 An Overview of Scalable Video Streaming <i>Mohammed Abumuala, Othman Khalifa and Aisha-Hassan A. Hashim</i>	88
Chapter 11 A Survey on Video Segmentation for Real-Time Applications <i>Haris Al Qodri Maarif, Sara Bilal, Teddy Surya Gunawan, Othman O. Khalifa</i>	100
Chapter 12 H.264/AVC Video Coding Tools and Functions <i>Sinzobakwira Issa, Othman O. Khalifa and Aisha-Hassan Abdulla</i>	107
Chapter 13 Speech Coding Techniques and Algorithms <i>Liban A. Kassim, Othman O. Khalifa, Teddy S. Gunawan</i>	116
Part II- Digital Watermarking	
Chapter 14 Digital Watermarking: An Overview <i>Othman O. Khalifa and Yusnita binti Yusof</i>	135
Chapter 15 Digital Watermarking : Related work <i>Othman O. Khalifa and Yusnita binti Yusof</i>	143
Chapter 16 Digital Watermarking Techniques and Methodologies <i>Othman O. Khalifa and Yusnita binti Yusof</i>	150
Chapter 17 Wavelet Transform for Digital Images Watermarking <i>Othman O. Khalifa, Yusnita Yusof</i>	156
Chapter 18 Wavelet Digital Watermarking System Design and Performance Evaluation <i>Othman O. Khalifa and Yusnita binti Yusof</i>	166
Chapter 19 An Improved Wavelet Digital Watermarking Software Implementation <i>Othman O. Khalifa and Yusnita binti Yusof</i>	175

Chapter 20	Adaptive Digital Watermarking System for Authentication of Intellectual Properties <i>Rashidah F. Olanrewaju, Azizah Abd Manaf and Akram Zeki</i>	182
Chapter 21	An Evaluation of Transform Domain Watermarking and its application to Intellectual Properties of images <i>Rashidah F. Olanrewaju, Othman O Khalifa, Aisha Hassan Hashim, A.A. Aburas and Akram Zeki</i>	192
Chapter 22	Applications of Digital Watermarking: Current and Future Trends <i>Othman O. Khalifa and Yusnita binti Yusof</i>	198
Chapter 23	State-Of-The-Art Digital Watermarking Attacks <i>Othman O. Khalifa and Yusnita binti Yusof</i>	204
Chapter 24	Performance evaluations of Digital Watermarking System <i>Yusnita binti Yusof and Othman O. Khalifa</i>	215
Part-III Multicast Transmission		
Chapter 25	Classifications Of Multicast Routing In Mobile Ad Hoc Networks <i>Mohammad Qabajeh, Aisha-Hassan A. Hashim, Othman O. Khalifa and Liana Qabajeh</i>	221
Chapter 26	Qualitive study on Multicast Routing Protocols In Manets <i>Mohammad Qabajeh, Aisha-Hassan A. Hashim, Othman O. Khalifa and Liana Qabajeh</i>	228
Chapter 27	Issues In Location-Based Multicast Routing In Manets <i>Mohammad Qabajeh, Aisha-Hassan A. Hashim, Othman O. Khalifa and Liana Qabajeh</i>	235
Chapter 28	Multicasting Challenges In Wireless Mesh Networks <i>M. L. Sanni, A. A. Hashim, F. Anwar and J. I. Daoud</i>	241
Chapter 29	Mobility Management In Multicast Environment <i>M. L. Sanni, A. A. Hashim, A. W. Naji and G. S. M. Ahmed</i>	249
Chapter 30	<i>Multicast Security</i> : Issues and Solutions <i>Mohammad Qabajeh, Aisha-Hassan A. Hashim and Othman O. Khalifa</i>	257
Chapter 31	Real-time MPEG-4 transmission over Wireless LAN <i>Abdirisag Mohammed Jama and Othman O. Khalifa</i>	263

Chapter 25

CLASSIFICATIONS OF MULTICAST ROUTING IN MOBILE AD HOC NETWORKS

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25.1. INTRODUCTION

Multicasting is a useful communication scheme that facilitates group communication. Multicasting can improve the efficiency of the wireless link when sending multiple copies of messages. Multicast is a relatively unexplored research area, when it is compared with Unicast [1]. Over the past few years, several multicast routing protocols have been proposed for Ad-Hoc networks. In this chapter, we first provide a classification approach of the multicasting techniques in mobile Ad-Hoc networks, followed by the description of the existing approaches that support QoS in mobile Ad-Hoc networks using multicasting scheme. We concentrate on hierarchical multicast routing protocols and position-based protocols, because of its relationship to our research. We will highlight their advantages and outline their limitations.

25.2 CLASSIFICATIONS OF MULTICAST ROUTING PROTOCOLS IN AD-HOC NETWORKS

Multicast routing protocols in MANETs can broadly classified into two types: *application-independent* and *application-dependent* multicast routing protocols [2]. Application-dependent multicast protocols are used only for specific applications for which they are designed. Although, application-independent multicast protocols are used for conventional multicasting. Application-independent multicast protocols can be classified as follows.